

ABSTRACT OF DISCLOSURE

Provided is a technique of improving the properties of a bipolar transistor. Described specifically, upon formation of a collector electrode around a base mesa by the lift-off method, a resist film is formed over connection portions between the outer periphery of a region OA1 and a region in which the base mesa 4a is formed, followed by successive formation of gold germanium (AuGe), nickel (Ni) and Au in the order of mention over the entire surface of a substrate so that the stacked film of them will not become an isolated pattern. As a result, the stacked film over the base mesa 4a is connected to a stacked film at the outer periphery of the region OA1, facilitating peeling of the stacked film over the base mesa 4a. In addition, generation of side etching upon formation of a via hole extending from the back side of the substrate to a backside via electrode is reduced by forming the backside via electrode using a material such as WSi which hardly reacts with an n type GaAs layer or n type InGaAs layer.